

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/28/99

Date Received: 01/21/99

Project: Metro Self Monitor, PO# M78182

Date Samples Extracted: 01/25/99

Date Extracts Analyzed: 01/27/99

**RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE
FOR CHROMIUM, COPPER, NICKEL, ZINC
USING METHOD 6010**

Samples Processed Using Method 3005A

Results Reported as mg/L (ppm)

| <u>Sample ID</u> | <u>Chromium</u> | <u>Copper</u> | <u>Nickel</u> | <u>Zinc</u> |
|------------------|-----------------|---------------|---------------|-------------|
| M78182 | 0.30 | 0.34 | 0.36 | 0.14 |
| Method Blank | <0.05 | <0.05 | <0.05 | <0.05 |

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QUALITY ASSURANCE RESULTS FOR TOTAL METALS BY INDUCTIVELY COUPLED PLASMA (ICP) (METHOD 6010)

Laboratory Code: 901104-01 (Duplicate)

| Analyte | Reporting Units | Sample Result | Duplicate Result | Relative Percent Difference | Acceptance Criteria |
|----------|-----------------|---------------|------------------|-----------------------------|---------------------|
| Chromium | mg/L (ppm) | 0.30 | 0.30 | 0 | 0-20 |
| Copper | mg/L (ppm) | 0.34 | 0.34 | 0 | 0-20 |
| Nickel | mg/L (ppm) | 0.36 | 0.38 | 5 | 0-20 |
| Zinc | mg/L (ppm) | 0.14 | 0.14 | 0 | 0-20 |

Laboratory Code: 901104-01 (Matrix Spike)

| Analyte | Reporting Units | Spike Level | Sample Result | % Recovery MS | % Recovery MSD | Acceptance Criteria | RPD |
|----------|-----------------|-------------|---------------|---------------|----------------|---------------------|-----|
| Chromium | mg/L (ppm) | 5 | 0.30 | 96 | 96 | 80-120 | 0 |
| Copper | mg/L (ppm) | 5 | 0.34 | 88 | 93 | 80-120 | 6 |
| Nickel | mg/L (ppm) | 10 | 0.36 | 98 | 91 | 80-120 | 7 |
| Zinc | mg/L (ppm) | 5 | 0.14 | 98 | 93 | 80-120 | 5 |

Laboratory Code: Laboratory Control Sample

| Analyte | Reporting Units | Spike Level | % Recovery LCS | % Recovery LCSD | Acceptance Criteria | RPD |
|----------|-----------------|-------------|----------------|-----------------|---------------------|-----|
| Chromium | mg/L (ppm) | 5 | 105 | 106 | 80-120 | 1 |
| Copper | mg/L (ppm) | 5 | 105 | 106 | 80-120 | 1 |
| Nickel | mg/L (ppm) | 10 | 110 | 113 | 80-120 | 3 |
| Zinc | mg/L (ppm) | 5 | 108 | 110 | 80-120 | 2 |

901104)

Mr 12199
AI

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Jensen, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
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January 28, 1999

DUPLICATE COPY

INVOICE #99ACU0128-1

Accounts Payable
Alaskan Copper Works
628 South Hanford St.
Seattle, WA 98134

RE: Project Metro Self Monitor, PO# M78182: Results of testing requested
by Gerry Thompson for material submitted on January 21, 1999.

1 water sample analyzed for
Chromium, Copper, Nickel, and Zinc
using Method 6010 @ \$80 per sample

\$ 80.00

Amount Due

\$ 80.00

FEDERAL TAX ID (b) (6)

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January 28, 1999

Gerry Thompson, Project Manager
Alaskan Copper Works
628 South Hanford St.
Seattle, WA 98134

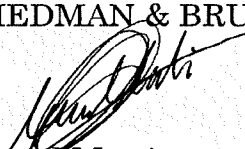
Dear Mr. Thompson:

Included are the results from the testing of material submitted on January 21, 1999 from your Metro Self Monitor, PO# M78182 project. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Manuel Marti
Project Manager

Enclosures
ACU0128R.DOC